

I. Who am I

- a. Professor James Banfield, Eastern Michigan University
- b. 25 years industry engineer-to-executive in IT/ IA (information assurance)
- c. Master's in IA, PhD in IA, Masters in Data Analytics (in process)
- d. EMU – National Center of Academic Excellence in Information Assurance (security)
- e. 550 –undergraduate, graduate (Master/PhD) in IA (40 students from DoD)

II. Biggest cyber-security threat today

- a. Need for shift from reactive to proactive defense and informed citizens
 - i. **Why-** mitigation of sensitive data breach
 1. **An advanced persistent threat (APT)** is when unauthorized user(s) employ multiple phases to break into a network, avoid detection, and harvest valuable information over the long term.
 2. **A Distributed Denial of Service (DDoS)** attack is an attempt to make an online service unavailable by overwhelming it with traffic from multiple sources.
 - ii. Tradition (current trend) – log events as they occur, then search for root cause
 - iii. Future (need, blooming standard)– gather/interpret data intelligence to make informed proactive decisions

III. What are we doing at EMU to help

- a. Filling a job market
 - i. **US Department labor project growth for Info-Sec professionals second largest behind only healthcare (2013)**
 - ii. Education
 1. NSA accredited curriculum
 - a. Incident response
 - b. Intel analysis
 - c. Secure systems administration
 - d. Network security and forensics
 2. 57% of students offered positions averaging \$52K in Junior year. 5 year out average \$64K.
 3. 83% students employed “in field” after graduation
 4. EMU security Test Bed
 5. Merit Cyber Range
- b. Outreach programs
 - i. High school –
 1. Dual enrollment
 2. University credit in AP classes; up to **15 University credit hours from High School programs**
 - ii. Local Business and community training
 1. Student and faculty led training sessions
 2. Student and faculty conference presentation